

## **Project Title:** Mental Well-being in the Tech Industry: An Exploratory Data Analysis

### **Project Proposal:**

This project aims to investigate the factors impacting mental health within the technology industry. We will use the Mental Health in Tech Survey dataset from Kaggle to explore the relationship between various demographic factors (age, gender, role, company size), work-related factors (work hours, remote work, benefits), and mental health outcomes (anxiety, depression, treatment seeking). We will analyze the prevalence of mental health conditions, identify potential risk factors within the tech workplace, and assess the effectiveness of company wellness programs.

**Data Source:** Research OSMH/OSMI Mental Health in Tech Survey; Years 2014, 2016, 2017

(<https://osmhhhelp.org/research.html?form=MG0AV3>)

### **Key Questions to Investigate:**

1. **Prevalence and Demographics:** What is the prevalence of mental health conditions (anxiety, depression, etc.) within the tech industry, and how does this vary across different demographics (age, gender, job role, company size, country)?
2. **Work-Related Factors:** Are certain work-related factors (long working hours, remote work status, perceived job insecurity, lack of work-life balance) associated with an increased risk of mental health issues?
3. **Wellness Program Effectiveness:** Do companies with mental health wellness programs show a lower prevalence of mental health conditions or increased treatment-seeking behavior among employees? What types of wellness programs appear to be most effective?
4. **Country-Specific Differences:** Are there significant differences in mental health outcomes and workplace factors across different countries represented in the dataset?

### **Analysis Plan:**

- **Data Cleaning and Preprocessing:** Handle missing data, convert categorical variables to numerical representations if needed, and ensure data consistency.
- **Descriptive Statistics:** Calculate frequencies, means, and standard deviations for key variables to understand the overall distribution of mental health conditions and workplace factors.
- **Correlation Analysis:** Examine correlations between demographic factors, work-related factors, and mental health outcomes.
- **Regression Analysis (Optional):** Explore potential predictive relationships between work-related factors and mental health outcomes using logistic or linear regression.
- **Visualization:** Create informative visualizations (bar charts, histograms, scatter plots, heatmaps) to illustrate key findings and patterns in the data.
- **Comparative Analysis:** Compare mental health outcomes and workplace factors across different demographic groups and company characteristics (e.g., company size, wellness program availability).

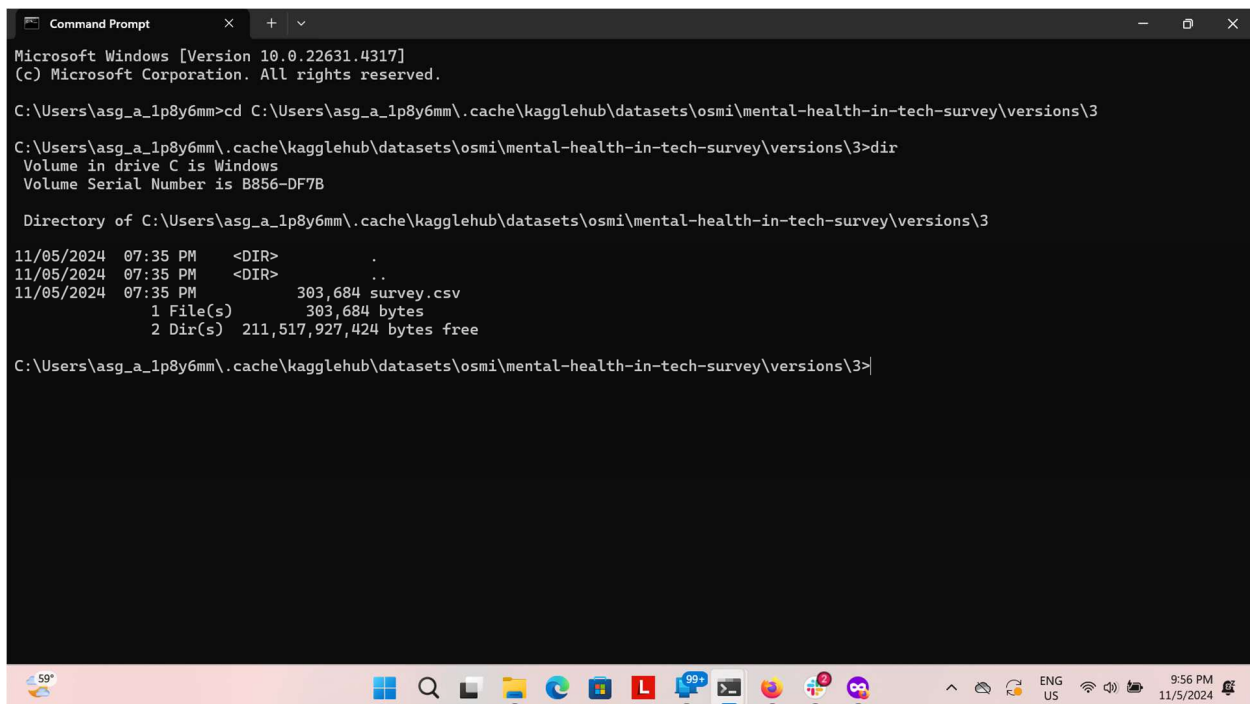
## Deliverables:

- Jupyter Notebook with data cleaning, analysis, and visualizations.
- README file summarizing the project, methodology, findings, and limitations.
- Presentation slides highlighting key findings and insights.

## Alignment with Project Guidelines:

This project satisfies the requirements for:

- **Data analysis techniques:** Descriptive statistics, correlation analysis, and potentially regression analysis.
- **Visualizations:** Ample opportunity for 6-8 visualizations.
- **Group collaboration:** Different team members can focus on specific aspects of the analysis or visualization.
- **Professional presentation:** The topic is relevant and allows for a compelling narrative.



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Command Prompt
Microsoft Windows [Version 10.0.22631.4317]
(c) Microsoft Corporation. All rights reserved.

C:\Users\asg_a_1p8y6mm>cd C:\Users\asg_a_1p8y6mm\.cache\kagglehub\datasets\osmi\mental-health-in-tech-survey\versions\3
C:\Users\asg_a_1p8y6mm\.cache\kagglehub\datasets\osmi\mental-health-in-tech-survey\versions\3>dir
Volume in drive C is Windows
Volume Serial Number is B856-DF7B

Directory of C:\Users\asg_a_1p8y6mm\.cache\kagglehub\datasets\osmi\mental-health-in-tech-survey\versions\3
11/05/2024  07:35 PM    <DIR>          .
11/05/2024  07:35 PM    <DIR>          ..
11/05/2024  07:35 PM                303,684 survey.csv
               1 File(s)                303,684 bytes
               2 Dir(s)  211,517,927,424 bytes free

C:\Users\asg_a_1p8y6mm\.cache\kagglehub\datasets\osmi\mental-health-in-tech-survey\versions\3>
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